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(11) EP 1 241 706 A3

(12)

EUROPEAN PATENT APPLICATION

(88) Date of publication A3:
18.02.2004 Bulletin 2004/08

(51) Int Cl.7: H01L 21/68, H01L 23/467,
H02N 13/00, C23F 1/08,
H01L 21/00

(43) Date of publication A2:
18.09.2002 Bulletin 2002/38

(21) Application number: 02005780.8

(22) Date of filing: 13.03.2002

(84) Designated Contracting States:
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU
MC NL PT SE TR

Designated Extension States:
AL LT LV MK RO SI

(30) Priority: 13.03.2001 US 808210

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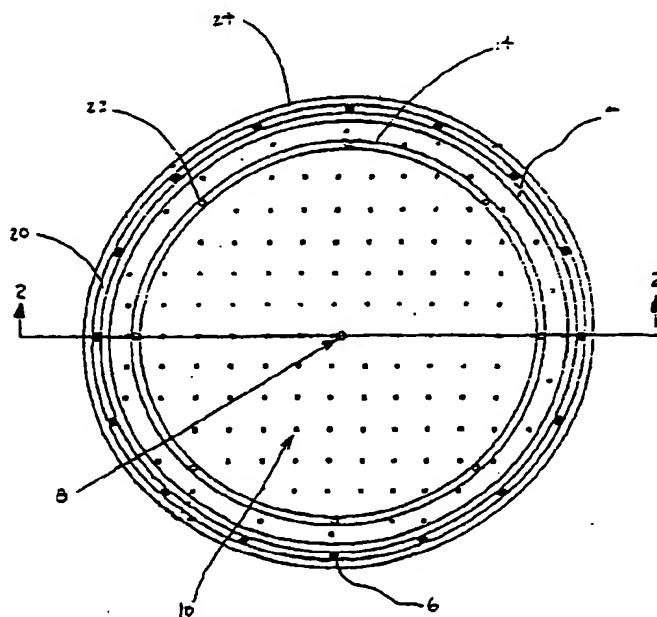
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(54) A gas cooled electrostatic pin chuck for vacuum applications

(57) An electrostatic pin chuck consisting of an annular array of gas inlets, located towards the periphery of the chuck, for providing a uniform distribution of cooling gas to a wafer held by the chuck. This uniform distribution of cooling gas results in a uniform transfer of heat from the wafer to the chuck. Two annular rims positioned towards the outer perimeter of the chuck, and

separated by an annular array of vacuum pumpout ports connected through a manifold to a vacuum pump, help to prevent leakages of cooling gas by functioning as gas bearing seals. Varying the annular thickness of the inner and outer rim, vacuum pump pressure, and the space between the wafer and chuck all affect the leakage rate of cooling gas from the chuck.

Fig. 1





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EUROPEAN SEARCH REPORT

Application Number
EP 02 00 5780

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<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 2px;">TECHNICAL FIELDS SEARCHED (Int.Cl.7)</td> </tr> <tr> <td style="padding: 2px;">H01L H02N C23F</td> </tr> </table>				TECHNICAL FIELDS SEARCHED (Int.Cl.7)	H01L H02N C23F				
TECHNICAL FIELDS SEARCHED (Int.Cl.7)									
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The present search report has been drawn up for all claims									
Place of search		Date of completion of the search	Examiner						
MUNICH		16 December 2003	Bader, K						
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="2" style="padding: 2px;">CATEGORY OF CITED DOCUMENTS</td> </tr> <tr> <td colspan="2" style="padding: 2px;"> X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document </td> </tr> <tr> <td colspan="2" style="padding: 2px;"> T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons ----- & : member of the same patent family, corresponding document </td> </tr> </table>				CATEGORY OF CITED DOCUMENTS		X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons ----- & : member of the same patent family, corresponding document	
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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
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